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09/645,896	08/25/2000	Jeffrey J. Gold	PD-200223	6089

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EXAMINER

STEVENS, THOMAS H

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/645,896

Applicant(s)

GOLD, JEFFREY J.

Examiner

Thomas H. Stevens

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claims 1-15 were examined.

### *Section I: Final Rejection*

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

**Claim 1:** A method of simulating the operation of a spacecraft (column 5, line 52) comprising the steps of requesting a connection to one of a plurality of simulated ground stations (column 6, lines 14-15); generating a range server name (as part of the TCP/IP address: column 3, lines 60-65); in response: other range server name (as part of the TCP/IP address: column 3, lines 60-65), generating server location parameters;

Art Unit: 2123

instantiating a range server dedicated to a single ground station (column 5, lines 14-22); calculating range data for each of the plurality of simulated ground stations (inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58; and column 3, lines 37-39); and, providing the range data for one of the plurality of simulated ground stations (inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58 and column 3, lines 37-39).

**Claim 2:** A method as recited in claim 1 (column 5, line 52; inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58) wherein the step of requesting comprises the step of requesting a connection to a simulated ground station from a spacecraft status and control client (column 5, lines 14-23).

**Claim 3:** A method as recited in claim 1 (column 5, line 52; inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58; column 5, lines 14-23) wherein the step of having a common IP address (column 3, lines 60-65), for the plurality of simulated ground stations while providing a unique port address for each simulated ground station (as part of the TCP/IP address: column 3, lines 60-65).

**Claim 4:** A method as recited in claim 1 (column 5, line 52; inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58; column 5, lines 14-23) wherein the step of requesting comprises requesting a connection to multiple ground stations, wherein each ground station (column 5, lines 14-22) has a unique port

Art Unit: 2123

address and a common port IP address (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22).

**Claim 5:** A method as recited in claim 4 (column 5, line 52; inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58; column 5, lines 14-23) wherein the step of generating a range comprises generating the range server name in response to the unique port address and using that name to instantiate a range server specific to a unique ground station (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22).

**Claim 6:** A method as recited in claim 1 (column 5, line 52; inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58; column 5, lines 14-23; and column 6, lines 62-63) further comprising the step of providing tracking information for the one of the plurality of simulated ground stations (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22).

**Claim 7:** A method of simulating the operation of a spacecraft (column 5, line 52) comprising the steps of generating range (inherent to the function of simulating/emulating between ground and orbiter: column 6, lines 46-58 and column 3, lines 37-39), attitude (column 5, line 30) and elevation data for a plurality of ground stations simultaneously (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22); identifying a desired ground station from the plurality of ground

Art Unit: 2123

stations; and, providing range data for the desired ground station to a real time client (columns 5-6, lines 65-67 and 1-3, respectively).

**Claim 8:** A method as recited in claim 7 (column 5, lines 30, 52; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; columns 5-6, lines 65-67 and 1-3, respectively) wherein the step of identifying comprises the step of generating a range server name (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22) and generating a tracking server name (tracking inherent normal data collection between orbiter and ground: column 6, lines 62-63; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22)

**Claim 9:** A method as recited in claim 7 (column 5, lines 30, 52; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; columns 5-6, lines 65-67 and 1-3, respectively) wherein the step of identifying further comprises in response to the step of generating a range server name (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22) and tracking server name, generating server (column 3, lines 62-65) location parameters.

**Claim 10:** A method as recited in claim 7 (column 5, lines 30, 52; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; columns 5-6, lines 65-67 and 1-3, respectively) further comprising the step of generating a connection (column 4, lines 29-42) to one of the plurality of simulated ground stations.

**Claim 11:** A method as recited in claim 7 (column 5, lines 30, 52; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; columns 5-6, lines 65-67 and 1-3, respectively) wherein the step of requesting comprises the step of requesting a connection (column 4, lines 29-42) to the multiple ground stations, wherein each ground station has a unique port address (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22).

**Claim 12:** A method as recited in claim 8 (column 5, lines 30, 52; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; columns 5-6, lines 65-67 and 1-3, respectively) wherein the step of generating a range server name comprises generating the range server name in response to the unique port address and wherein the step of generating a tracking server name comprises generating the tracking server name in response to the unique port address (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22).

**Claims 13:** A spacecraft emulation system comprising: a spacecraft status and control client (abstract); an interface coupled to the spacecraft status and control client for generating identification information for a desired ground station; a range data generator for generating range data for a plurality of ground stations (multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22); and, a range server coupled to the range data generator (column 4, lines 29-42; tracking inherent to the daily routine between ground station and orbiter: column 6, lines 61-64) and spacecraft status and

Art Unit: 2123

control client having the range data for said plurality of ground stations therein, said range server providing range data to said spacecraft status and control client (column 6, lines 65-67).

**Claim 14:** A spacecraft emulation system as recited in claim 13 (abstract; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; column 6, lines 65-67) further comprising a tracking server coupled elevation and attitude (column 5, line 31) data generator and the spacecraft status and control client (column 3, lines 50-67), the tracking server providing elevation and azimuth data to said spacecraft status and control client (tracking=simulated system dynamics, column 6, lines 37-45).

**Claim 15:** A spacecraft emulation system as recited in claim 13 (abstract; multiple terminals, multiple stations, thus multiple IP address: column 5, lines 14-22; column 6, lines 65-67; column 3, lines 50-67; tracking=simulated system dynamics, column 6, lines 37-45) wherein said interface, range data generator, range server, tracking data generator and tracking server are coupled within a single unit (tracking=simulated system dynamics, column 6, lines 30-45).



***Section II: Response to Applicant's Arguments***

3. Applicant is thanked for addressing this issue. Applicant states the prior art lack of teaching a ranger server. According the present application's specification, the VIM initiates control of the real-time spacecraft simulation as well as providing servers that simulate the TCP/IP servers of the ground station baseband unit and antenna control unit (specification, pg 6, lines 15-19), thus the ranger server name must originate from somewhere. The specification on pages 10-11, lines 25-27 and 1-4, states.. *"In operation, a connection to one of a plurality of ground stations is requested. The desired range server name is generated and in response to the range server name, the server location parameters are also obtained. Range data is continually calculated for each of the plurality of simulated ground stations supported by the system and the range server provides data for the plurality of simulated ground stations"* while drawing 2 depicts the range data 56 source as the satellite simulation 54, thus assuming the ranger server originates from the satellite simulation source, the prior art also has a satellite simulation source.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2123

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (8:00 am- 4:30 pm EST).

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Leo Picard ((571) 272-3749). The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).



October 21, 2005

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